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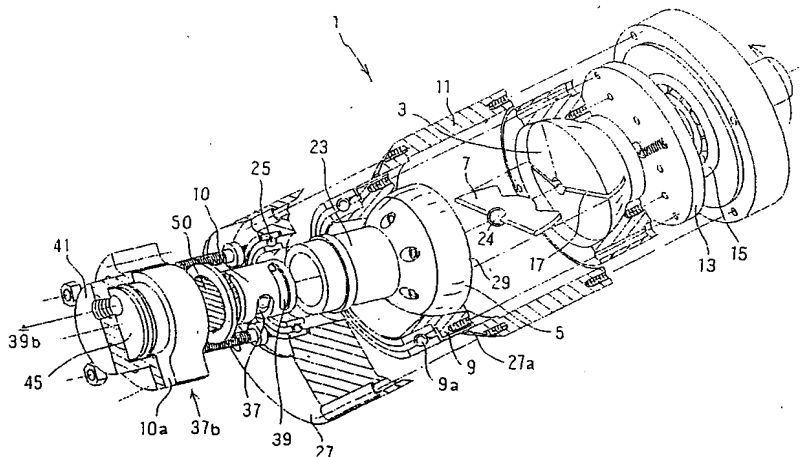
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(54) Title: SWASH-PLATE VARIABLE VOLUME CHAMBER-TYPE FLUID MACHINE

(54) 発明の名称: 斜板容積可変室型流体機械



(57) Abstract: A swash-plate variable volume-type fluid machine where, without causing the increase in dimensions, weight, and power loss in the machine, fluid leakage is constrained and quietness and durability are achieved by a simple structure. A swash-plate variable volume-type fluid machine (61) has a conical body (3) and a circular plate body (5) that are rotatably and oppositely supported to each other with their center axes being intersected, and a peripheral wall (9) covering an outer periphery of the circular plate body (5) and having a spherical inner peripheral surface. Variable volume chambers (B, C, D) are formed with a contact line (A) between them by providing a partition plate (7) in a groove (17) of the conical body (3) and arranging the conical body (3) and the circular plate body (5) in line so as to be in contact with each other. Fluid is charged to and discharged from charge/discharge holes (31, 33) communicated with the variable volume chambers (B, C, D). A synchronous mechanism (29) is provided in the machine, and the mechanism causes the circular plate body (5) and the conical body (3) to rotate about their respective axes in a manner synchronized to each other.

[続葉有]



(AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR),  
OAPI 特許 (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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添付公開書類:

— 国際調査報告書

(57) 要約:

寸法や重量、動力損失を増大させずに、流体の漏れを押さえ、簡易な構成で静粛かつ耐久性を有する斜板容積可変室型流体機械を提供することを目的とする。

斜板容積可変室型流体機械（61）は、中心軸線を交差させてそれぞれ回転可能に互いに対向支持した円錐体（3）及び円板体（5）と、この円板体（5）の外周を覆い球面状の内周面を有する周壁（9）とを有する。さらに、円錐体（3）の溝（17）内に仕切板（7）を設け、円錐体（3）と円板体（5）とを線状に当接配置することで、当接線（A）を挟んで複数の容積可変室（B，C，D）を構成し、この容積可変室（B，C，D）と連通する給排孔（31，33）から流体を給排させ、円板体5と円錐体3とをそれぞれの中心軸線について互いに同期して回転する同期機構（29）を設ける。

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/12148

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> F04C3/06, F04C18/54

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> F04C3/06, F04C18/00, F04C18/54

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2003
Kokai Jitsuyo Shinan Koho	1971-2003	Toroku Jitsuyo Shinan Koho	1994-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2001-003876 A (Yugen Kaisha Kawakami Seisakusho), 09 January, 2001 (09.01.01), Full text; all drawings (Family: none)	1-4
A	JP 2000-087885 A (Yugen Kaisha Kawakami Seisakusho), 28 March, 2000 (28.03.00), Full text; all drawings (Family: none)	1-4
A	JP 55-004956 B (Erebon Kabushiki Kaisha), 01 February, 1980 (01.02.80), Full text; Fig. 3 (Family: none)	1-4

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

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"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search  
02 March, 2004 (02.03.04)Date of mailing of the international search report  
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Japanese Patent Office

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/12148

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E, A	JP 2002-364572 A (Yugen Kaisha Kawakami Seisakusho), 18 December, 2002 (18.12.02), Full text; all drawings (Family: none)	1-4